

CHAPTER 7 EXISTING INSTALLATIONS: HEATING BOILERS

700 MAXIMUM ALLOWABLE WORKING PRESSURE

- 700.1 The maximum allowable working pressures on the shell or drum of riveted heating boiler shall be determined in accordance with chapter 6, except that in no case shall the maximum allowable working pressure of a steam-heating boiler exceed fifteen (15) pounds per square inch.
- 700.2 The maximum allowable working pressure of a boiler composed principally of cast iron shall not exceed fifteen (15) pounds unless such boiler complies with all other requirements of the rules and regulations for power boilers.
- 700.3 The maximum allowable working pressure of a boiler composed principally of cast iron shall not exceed fifteen (15) pounds gage pressure.
- 700.4 A radiator in which steam pressure is generated at a pressure of fifteen (15) pounds or less shall be considered a low pressure boiler.
- 700.5 The maximum allowable working pressure of a boiler having cast-iron shell or heads and steel or wrought-iron tubes shall not exceed fifteen (15) pounds.
- 700.6 The maximum allowable working pressure shall in no case exceed the pressure indicated by the manufacturer's identification stenciled or cast upon the boiler or upon a plate secured to it. In the absence of a manufacturer's identification stencil or plate the maximum allowable working pressure shall not exceed that guaranteed in the manufacturer's specification or catalogs.
- 700.7 If in the judgment of an inspector, a steam-heating boiler is not safe for operation at the pressure previously approved, the pressure shall be reduced to the safe amount or proper repair shall be made or the boiler retired from service.

701 SAFETY VALVES

- 701.1 Each steam-heating boiler shall be provided with one or more safety valves with a total area of not less than one square inch (1" sq.) for each five square feet (5' sq.) of grate area or equivalent, if grates are not used. The steam-relieving capacity of the safety valve or valves on any boiler shall be sufficient to prevent the boiler pressure from rising more than five (5) pounds above the maximum allowable working pressure of the boiler.
- 701.2 If there is any doubt as to the capacity of the safety valve, an accumulation test shall be run. No safety valve shall be smaller than three-quarter inch (3/4") inch in diameter or larger than four and one-half inches (4 1/2") inches in diameter.
- 701.3 No stop valve of any description shall be located between a boiler and its safety valve, nor in the safety valve discharge pipe.

702 PARTS AND EQUIPMENT

- 702.1 Each steam boiler shall have a steam-pressure gage connected to the steam space of the boiler itself or on steam pipe near the boiler. The graduations of the steam gage shall not be less than fifteen (15) pounds nor more than thirty (30) pounds.
- 702.2 Each boiler shall have at least one water gage glass with the lowest visible part above the heating surfaces in the primary combustion chamber. When, in the judgment of an inspector, the heating surfaces above the low-water line may be injured by contact with gases of high temperature, the water gages shall be raised until the lowest visible part of the glass gage is above the such testing surface.
- 702.3 Each steam boiler shall have two or more gage cocks located within the visible length of the water gage glass except when such boiler is provided with two water gage glasses.
- 702.4 If a boiler may be closed off from the heating system by closing a steam stop valve, there shall be a check valve in the condensate return line between the boiler and the system.
- 702.5 If any part of a heating system may be closed off from the remainder of the system by closing a steam stop valve, there shall be a check valve in the condensate return pipe from that part of the system.

702 PARTS AND EQUIPMENT (Continued)

- 702.6 Feed-water connections shall be independent of any water-gage connections and it is recommended that the connections be made to the condensate return pipe of reservoir of the condensate return pump. There shall be a check valve in the feed-water line close to the boiler.
- 702.7 Each mechanically fired boiler shall be equipped with a cut-off low-water cut-off so located as to automatically cut off the fuel supply in case the water level falls to a point not lower than the tip of the bottom nut of the water glass. Each cut-off shall have a drain run to within six inches (6") of the floor.
- 702.8 When two or more mechanically fired boilers are connected to the same system, each boiler shall have independent low-water cut-offs, controls, and gages
- 702.9 If a low-water fuel cut-out device is electrically operated, it shall be so connected that it will assume the "cut-out" position when the electric current is off.
- 702.10 Each condensate return pump shall be provided with an automatic water level control set to maintain the water level within the limits of two gage cocks.

703 REPAIRS OR REPLACEMENTS

- 703.1 When repairs or replacement of parts or piping are made or fittings or appliances renewed or attached to a boiler, the rules applying to new installations shall be followed as nearly as practicable.
- 703.2 When a safety valve is replaced the requirements of chapters 2 and 3, Article 10 shall be complied with, no valve being less than three-quarter inch ($3/4$ ") in diameter or larger than four and one-half inches ($4\ 1/2$ ") in diameter.

